



Leafroller Mating Disruption in Commercial Orchards - 2001

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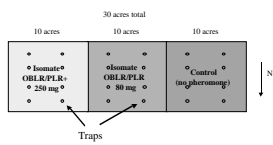
Acknowledgements

We would like to thank the apple growers of Washington, the Washington Tree Fruit Research Commission, Pacific Biocontrol, and 3M Corporation for funding this project.

Introduction

- ◆ Evaluate efficacy of pheromones as a control for leafroller
- ◆ Commercially used Pacific Biocontrol hand-applied rope-type dispensers and 3M sprayable formulations
- ◆ Compared different rates and application frequency of pheromone treatments
- ◆ Evaluated disruption of mating behavior, larval densities and fruit injury.

Experimental Design



Methods and Materials

- ◆ 30-40 acre blocks divided into 10 acre plots
- ◆ Delta style traps with a high and standard load lure
- ◆ Bait traps to assess female mating status

Pacific Biocontrol Hand Applied Dispensers

- ◆ Isomate OBLR/PLR (80mg) 400 dispensers per acre
- ◆ Isomate OBLR/PLR (250mg) 200 dispensers per acre
- ◆ Isomate OBLR/PLR (80mg) 200 dispensers per acre
- ◆ Untreated (= no pheromone)

3M Sprayable Pheromone

- ◆ 20g active ingredients/acre + Nu-Film 17
- ◆ 40g active ingredients/acre + Nu-Film 17
- ◆ Untreated (= no pheromone)

Summary

- ◆ Both hand-applied and sprayable pheromone applications resulted in significant reduction in moth captures
- ◆ Significant rate response was noted in sprayable pheromone blocks
- ◆ No consistent reduction in larval populations was noted in pheromone treated blocks

Hand-Applied Dispensers

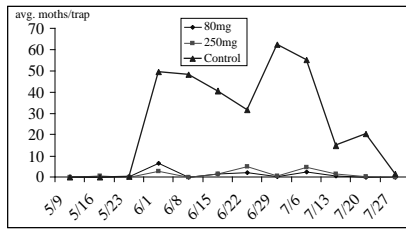


Fig. 1. Site 1 1st generation hand applied pheromone dispensers, 10mg lure trap catch, 2001.

Sprayable Pheromone

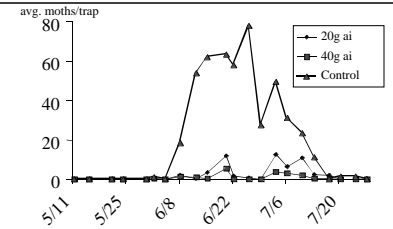


Fig. 4. Site 2 1st generation sprayable pheromone, 10mg lure trap catch, 2001.

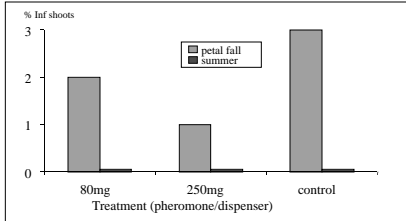


Fig. 2. Site 1 larval density, hand applied pheromone dispenser block, 2001.

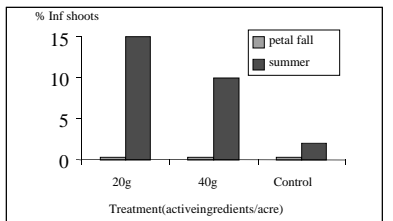


Fig. 5. Site 2 sprayable pheromone larval density, 2001.

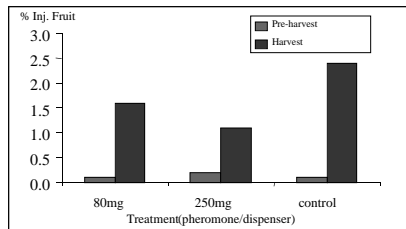


Fig. 3. Site 1 hand applied dispensers fruit injury assessment, 2001

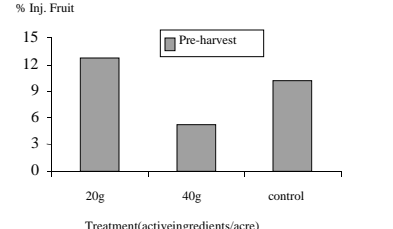


Fig. 6. Site 2 sprayable pheromone fruit injury assessment, 2001.